

In the Claims

1-23. (cancelled)

24. (new) A device for producing a riveted joint with a rivet having a rivet jacket and a rivet pin received within the rivet jacket, comprising:

means for driving the rivet through workpieces to be joined including a cylindrical part with a firing channel, including a firing bolt receivable in said firing channel and including a cylindrical striking member arranged between the rivet and said firing bolt and impacted by said firing bolt;

a first flexible element in said cylindrical part biasing said striking member against the rivet pin;

a piston and a joining member coupled to said piston forming said cylindrical part, said piston and said joining member having aligned boreholes; and

means for pulling the rivet in the device.

25. (new) A device according to claim 24 wherein said first flexible element is a helical spring.

26. (new) A device according to claim 24 wherein

said striking member comprises a centering device for the rivet pin on an end of said striking member facing the rivet.

27. (new) A device according to claim 24 wherein

a flexible buffer element is arranged at an end of said cylindrical part facing the rivet to buffer movements of said striking member when the rivet is driven through the workpieces.

28. (new) A device according to claim 15 wherein

said means for pulling the rivet comprises a clamp sheathing connected to said joining member, clamping jaws surrounded by said joining member and arranged around the rivet pin, a guiding sleeve receiving said clamp sheathing and said joining member, an end piece in an axial end of said guiding sleeve facing the rivet and having a borehole in a center thereof receiving the rivet pin, and a second flexible element biasing said end piece to engage and spread said clamping jaws before and during the rivet being driven through the workpieces.

29. (new) A device according to claim 28 wherein

a cylinder is connected to said guiding sleeve, said piston being movable in said cylinder in a pulling direction opposite to a direction of driving the rivet through the workpieces during pulling of the rivet;

a third flexible element biases said piston in a direction opposite to said pulling direction; and

pressure means applies pressure to said piston to move said piston in said pulling direction.

30. (new) A device according to claim 24 wherein

a compressed air connection is selectively in fluid communication with said firing bolt to move said firing bolt into engagement with said striking member to drive the rivet through the workpieces;

a pneumatic/hydraulic pressure connector is selectively in fluid communication with said compressed air connection to supply hydraulic pressure to said piston during pulling of the rivet;

a rapid evacuation valve is selectively in fluid communication with a pneumatic pressure side of said pneumatic/hydraulic converter; and

a pneumatic switch is movable between first, second and third positions selectively connecting said compressed air connection to said firing bolt, to said pneumatic/hydraulic pressure converter and to said rapid evacuation valve, respectively.

31. (new) A device according to claim 30 wherein

said pneumatic/hydraulic converter is mounted in a handle or the device.

32. (new) A rivet for use in a device for producing a riveted joint in which the device

has means for driving the rivet through workpieces to be joined and has means for pulling the rivet, the rivet comprising:

a rivet jacket;

a rivet pin tightly connected to and received with said rivet jacket;

a pyramid shaped point on a first axial end of said rivet pin facing the workpieces; and

catch means on an exterior surface of said rivet pin and an interior surface of said rivet jacket, said catch means on each of said rivet jacket and said rivet pin including annular surfaces substantially perpendicular to longitudinal axes of said rivet pin and said rivet jacket and angled surfaces extending from said annular surfaces and tapering in a direction away from said first end;

whereby said rivet pin latches to said rivet jacket by engagement of the respective annular surfaces thereof during driving of the rivet through the workpieces.

33. (new) A rivet according to claim 32 wherein
said rivet pin comprises a second axial end opposite said first axial end, said second axial end being tapered.

34. (new) A rivet according to claim 33 wherein
said second axial end is pyramid shaped.

35. (new) A device for producing a riveted joint with a rivet having a rivet jacket and a rivet pin received within the rivet jacket, comprising:

means for driving the rivet through workpieces to be joined including a cylindrical part with a firing channel, including a firing bolt receivable in said firing channel and including a cylindrical striking member arranged between the rivet and said firing bolt and impacted by said firing bolt;

a first flexible element in said cylindrical part biasing said striking member against the rivet pin; and

means for pulling the rivet in the device.

36. (new) A device according to claim 35 wherein
said first flexible element is a helical spring.

37. (new) A device according to claim 35 wherein
said striking member comprises a centering device for the rivet pin on an end of said striking member facing the rivet.

38. (new) A device according to claim 35 wherein
a flexible buffer element is arranged at an end of said cylindrical part facing the rivet to buffer movements of said striking member when the rivet is driven through the workpieces.

39. (new) A device according to claim 35 wherein
said cylindrical part includes a joining member; and
said means for pulling the rivet comprises a clamp sheathing connected to said joining member, clamping jaws surrounded by said joining member and arranged around the rivet pin, a guiding sleeve receiving said clamp sheathing and said joining member, an end piece in an axial end of said guiding sleeve facing the rivet and having a borehole in a center thereof receiving the rivet pin, and a second flexible element biasing said end piece to engage and spread said clamping jaws before and during the rivet being driven through the workpieces.

40. (new) A device according to claim 39 wherein
said cylindrical part comprises a piston coupled to said joining member;
a cylinder is connected to said guiding sleeve, said piston being movable in said cylinder
in a pulling direction opposite to a direction of driving the rivet through the workpieces during
pulling of the rivet;
a third flexible element biases said piston in a direction opposite to said pulling direction;
and
pressure means applies pressure to said piston to move said piston in said pulling
direction.

41. (new) A device according to claim 35 wherein
said cylindrical part comprises a piston;
a compressed air connection is selectively in fluid communication with said firing bolt to
move said firing bolt into engagement with said striking member to drive the rivet through the
workpieces;
a pneumatic/hydraulic pressure connector is selectively in fluid communication with said
compressed air connection to supply hydraulic pressure to said piston during pulling of the rivet;
a rapid evacuation valve is selectively in fluid communication with a pneumatic pressure
side of said pneumatic/hydraulic converter; and
a pneumatic switch is movable between first, second and third positions selectively
connecting said compressed air connection to said firing bolt, to said pneumatic/hydraulic
pressure converter and to said rapid evacuation valve, respectively.

42. (new) A device according to claim 41 wherein
said pneumatic/hydraulic converter is mounted in a handle or the device.